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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,945	12/31/2003	Se Woong Park	HI-0177	6959

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EXAMINER

MOREHEAD, JOHN H

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/747,945	PARK, SE WOONG	
	Examiner John Morehead	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 July 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 and 20-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 07/31/2007 have been fully considered but they are not persuasive.
2. Applicant argues, regarding claims 6 and 10, that para 0028 specifically states that the lens has a focusing distance of about $11.8 \pm 1\text{mm}$ and an image pickup range of about 20-70 cm. Examiner respectfully notes that although para 0028 states "the lens has a focusing distance of about $11.8 \pm 1\text{ mm}$, an image pickup distance range of about 20-70 cm," one of ordinary skill in the art would not know the standard for measuring the degree or parameter intended. Mentioning of a particular range in the specification does not give one of ordinary skill in the art the standard for measuring a focusing distance of about $11.8 \pm 1\text{mm}$, and an image pickup range of about 20-70 cm. "About" refers to an indefinite value and does not particularly point out and distinctly claim the subject matter which applicant regards as the invention, therefore Examiner maintains rejection of claims 6 and 10 under 35 U.S.C. 112 2nd paragraph.
3. Applicant further argues that neither Wada, nor Kato in combination, discloses a position sensor configured to detect the position of the driving barrel within the camera. Examiner respectfully disagrees. As presented in the previous office action, fig. 1 of Wada is the camera, meaning every component that is connected in fig. 1 of Wada is the camera. The position sensor or range finder of Wada, fig. 1 element 24, is within the camera of Wada, fig. 1. Furthermore, as stated in the previous office action, the range finder, as disclosed by Wada constantly emits infrared rays to detect the position

of the iris. Once the infrared rays detect there is an iris present, the camera is going to position itself to attain the best possible picture of the iris. Kato teaches a driving barrel that extends to a photographing position. Therefore taking the combined teaching of Wada and Kato, as a whole, it would have been **obvious** to one of ordinary skill in the art that based upon the range finder as disclosed by Wada, it has to detect the position of the driving barrel as disclosed by Kato, in order to position the iris recognition camera to attain the best possible picture of the iris detected (see Wada, fig. 7).

4. Applicant further argues that Wada, nor Kato in combination, discloses moving a camera lens to an initial position detected by a position sensor after the position sensor detects the user; thereafter moving the camera lens from the initial position to an image pickup location where a user's iris can be captured, by way of amendment to claim 20. Examiner respectfully disagrees. As disclosed by Wada in para 0053 and 0054, based upon the range finder, the iris recognition camera, more particularly, the lens driving motor is adjusted step by step to attain the iris detected. Therefore Wada meets the limitation necessitated by amendment. Once the range finder detects an iris is present, the lens driving motor is also going to move several times to attain the best possible picture of the iris, or moving the camera to an initial position, then moving the camera to an image pickup location where a user's iris can be captured. The same is applied to method claim 26.

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claim 1 recites the limitation "a position sensor configured to detect a position of the driving barrel within the system." There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, Examiner will consider system to be "camera" because system was not mentioned in previously in claim 1.
8. Claims 6, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Claim 6 claims "about 11.8 \pm 1 mm." Claim 10 claims "about 20-70 cm." MPEP 2173.05 (b) section F
10. The phrases "relatively shallow," "of the order of," "the order of about 5mm," and "substantial portion" were held to be indefinite because the specification lacked some standard for measuring the degree intended and, therefore, properly rejected as indefinite under 35 U.S.C. 112, second paragraph. *Ex parte Oetiker*, 23 USPQ2d 1641 (Bd. Pat. App. & Inter. 1992).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-5, 7-9, 11, 12, and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583.

14. Re claim 1, Wada discloses an iris recognition camera (fig. 1), and a position sensor (fig. 1 element 24) configured to detect a position of the driving barrel within the camera (fig. 7, shows a flow chart which illustrates how the range finder, causes the cameras to move to proper position, para 0047-0053).

Wada fails to teach: a driving barrel configured to support a lens; a moving device configured to reciprocatingly move the driving barrel perform both focus and zoom operations. However, Kato teaches a lens barrel movable between an imaging position and a retracted position that is closer to the body of the camera than the

imaging position and barrel position restraint means which permits the movement of the lens barrel when the lens barrel moves to the imaging position or the retracted position and which restrains the movement of the lens barrel in the direction of the optical axis when the lens barrel has reached the imaging position (Kato col. 5 lines 32-39).

Therefore, taking the combined teachings of Wada and Kato, as a whole, it would have been obvious to one of ordinary skill in the art to combine Wada's iris recognition camera with Kato's movable lens barrel by mounting the movable lens barrel where the wide-angle lens is positioned on the iris imaging apparatus, so that upon detection of a user based on the ranger finder, the controller can position the wide angle lens camera by either tilting the wide angle lens left or right, or moving the drive barrel backward or forward not only to obtain the image of the person whose iris is being imaged, but also have the ability of iris imaging by the wide-angle lens based on the zooming capabilities of Kato, furthermore two sets of lens can be used for either wide-angle or telephoto purposes therefore, the telephotographic lens can also be moved into Kato's lens barrel (Kato, col. 3 lines 9-29).

Re claim 2, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the moving device (Wada, fig. 3 element 20) comprises: a motor (Wada, fig. 3 element 21); a lead screw (Wada, fig. 3 element 45) connected to the motor at one end (Wada, fig. 2 and fig. 3, the tilt table 20 includes pivoting axes 20a and 20b which is coupled to the motor 21, and the screw 45

is connected to the tilt table, therefore the screw is connected to the motor); and a rack (Wada, fig. 3 element 41) coupled to an outer circumference of the lead screw.

Re claim 3, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 2, wherein the motor comprises a step motor (Wada, fig. 1 elements 20 and 21) (based on applicants specification, examiner will define step motor as: a device configured to provide an accurate rotating amount, Wada, fig. 1 element 20 is coupled to element 21, Wada para 0036, 0037 and 0043).

Re claim 4, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the driving barrel (Kato, fig. 1) is provided at one side with a detecting portion (Wada, fig. 1 element 30) configured to communicate with the position sensor (Wada, fig. 1 element 24) so that the position sensor detects a position of the driving barrel (Wada, fig. 7 para 0047-0053).

Re claim 5, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the lens comprises a wide-angle lens (Wada, fig. 1 element 25).

Re claim 7, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, further comprising one or more guide

bars (Kato, fig. 1 element 6) configured to guide the driving barrel during reciprocating movement (Kato, col. 3 lines 21-27).

Re claim 8, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 7, wherein the one or more guide bars comprises a pair of guide bars (Kato, fig. 1 and fig. 2 element 6), respectively, positioned on opposite sides of the driving barrel (Kato, based on fig. 6 the movable barrel is comprised of guide bars on each side of the camera body).

Re claim 9, the combined teachings of Wada and Kato, as a whole, the iris recognition camera according to claim 1, wherein the position sensor is positioned behind the lens (Wada, fig. 1 and Kato, fig. 1, once Kato's movable barrel is mounted on Wada's iris imaging apparatus, the wide angle lens will be able to move back and forth, therefore the position sensor will be behind the lens).

Re claim 11, the combined teachings of Wada and Kato, as a whole, further teach the iris recognition camera according to claim 1, wherein the position sensor (Wada, fig. 1 element 24) comprises one of an optical sensor and a contact sensor (para 0038).

Re claim 12, the combined teachings of Wada and Kato, as a whole, further teach an iris recognition system comprising the iris recognition camera of claim 1 (claim limitation has already been discussed and rejected, see claim 1).

Re claim 20, the combined teachings of Wada and Kato, as a whole, further teach a method of operation for an iris recognition camera, comprising: detecting a user; moving a camera lens to an initial position detected by a position sensor after the position sensor detects the user; thereafter moving the camera lens from the initial position to an image pickup location where a user's iris can be captured; and performing the image pickup using an image pickup device (Wada, fig. 7 also para 0053 and 0054, furthermore see arguments above).

Re claim 21, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the camera lens comprises a wide-angle lens (claim limitation has already been discussed, see claim 18).

Re claim 22, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the image pickup device comprises a charge-coupled device (Wada, para 0039).

Re claim 23, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the iris recognition camera comprises

a driving source for moving the lens in the form of a step motor (claim limitation has already been discussed and rejected, see claim 3).

Re claim 24, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 20, wherein the iris recognition camera further comprises a power transmission (i.e. a motor) configured to transmit power for moving the camera lens (claim limitation has already been discussed and rejected, see claim 2).

Re claim 25, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 24, wherein the power transmission device includes a lead screw configured to be rotated by power from a driving source, and rack screw-coupled to an outer circumference of lead screw (claim limitation has already been discussed and rejected, see claim 2).

Re claim 26, the combined teachings of Wada and Kato, as a whole, further teach a method of operation for an iris recognition camera, comprising: turning on power of an iris recognition camera; moving a lens to an initial position; detecting a user; capturing an iris image of the user by moving the lens to a location where the iris image is focused; and storing a current location of the lens (Wada, fig. 7 also para 0047-0054).

Re claim 27, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, wherein the initial position is detected by a position sensor (claim limitation has already been discussed and rejected, see claim 1).

Re claim 28, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, further comprising: comparing, when a new user is detected, the current location of the lens with current location and the appropriate an appropriate location for the lens for the new user; calculating a difference between the location; and moving the lens by the calculated difference to perform the image pickup (Wada fig. 7, also para 0048 and 0049).

Re claim 29, the combined teachings of Wada and Kato, as a whole, further teach the method according to claim 26, wherein the lens comprises a wide-angle lens (claim limitation has already been discussed and rejected, see claim 21).

15. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583 and in further view of Abe, 6747814.

Re claim 6, claim 6 requires the iris recognition camera according to claim 5, wherein the wide-angle lens has a focusing distance of about 11.8 ± 1 mm.

The combination of Wada and Kato, as a whole, fail to teach the claim limitation as recited above in claim 6. However, Abe teaches a wide-angle lens with high quality optical characteristics that eliminates eclipsing and the like, also the total lens has a focusing distance of 12 mm. (Abe, col. 1 lines 52-54 and col. 7 lines 40-47).

Therefore taking the combined teachings of Wada and Kato, and in further view of Abe, as a whole, it would have been obvious to one of ordinary skill in the art to place Abe's wide-angle lens in Wada's iris recognition camera with Kato's movable barrel to provide a thin, compact, and light weight design that images elements with high pixel counts, thus enabling the wide-angle camera lens to also image the iris of an individual (Abe, col. 1 lines 55-58).

16. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al US 2002/0191076 in view of Kato et al US 6161583 and in further view of Oda et al US 6850631.

Re claim 10, claim 10 requires the iris recognition camera according to claim 1, wherein the lens has an image pickup distance range of about 20-70 cm.

The combination of Wada and Kato, as a whole, fail to teach the above limitation as recited in claim 10. However, Oda teaches an iris input device in which the focal length of the lens is fixed at a value within approximately 0.5 to 50 cm (Oda, col. 4 lines 28-29).

Therefore, taking the combined teachings of Wada and Kato, in further view of Oda, as a whole, it would have been obvious to one of ordinary skill in the art to have a lens with a pickup distance range of about 20-70 cm in order to get a proper reading of the iris, anything less than 20 cm may cause an inaccurate reading, or cause the eye to come into contact with the iris recognition camera (Oda, col. 4 lines 28-46).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Morehead whose telephone number is 571-270-1183. The examiner can normally be reached on Monday - Friday (alt) 7:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM



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